## SELECTION OF EXPOSURE PATHWAYS FOR THE NBSA

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway		
Current/ Future				Angler/Sportsman	Young Child (1 to <7 years)	Ingestion	Quantitative	Site-related contaminants have been detected in fish. Studies have found that despite Health Advisories for Eating Fish and Crabs Caught in New Jersey Waters, individuals do fish in Newark Bay and consume		
		Fish Tissue	Fish from NBSA		Adolescent (7 to <19 years)	Ingestion	Quantitative	Fish. This pathway assumes the receptor will consume fish caught fro Newark Bay and share it with family members.  Site-related contaminants have been detected in crabs. Studies have found that despite Health Advisories for Eating Fish and Crabs in New Jersey Waters, individuals do crab in the Newark Bay area and consucrabs. This pathway assumes the receptor will consume crabs caugh from Newark Bay and share it with family members.		
					Adult (>18 years)	Ingestion	Quantitative			
			Crabs from NBSA	Angler/Sportsman	Young Child (1 to <7 years)	Ingestion	Quantitative			
		Crab Tissue			Adolescent (7 to <19 years)	Ingestion	Quantitative			
					Adult (>18 years)	Ingestion	Quantitative			
		Waterfowl,	Other species		Young Child (1 to <7 years)	Ingestion	Qualitative	Limited data; ingestion of animals other than fish/crabs likely to be		
			from NBSA	Angler/Sportsman	Adolescent (7 to <19 years)	Ingestion	Qualitative	minimal.		
					Adult (>18 years)	Ingestion	Qualitative			
		Fish/crab/ other species	r Fish/crab/other species	Transient Person	Multiple ages	Ingestion	Qualitative	Evidence of homeless camps has been observed in the study area. Limited exposure pattern data would make quantification highly uncertain. Potential risks relative to other receptors are discussed in the uncertainty section.		
	Intertidal/	Accessible	Accessible			Incidental Ingestion	None			
	Subtidal	Surface Sediment	Surface Sediment	Angler/Sportsman	Child (1 to <7 years)	Dermal Contact	None			
	Surface Sediment					Inhalation of Vapors	None			
					Adolescent (7 to <19 years)	Incidental Ingestion	Quantitative	Angler may contact sediment while fishing or crabbing from the banks		
						Dermal Contact	Quantitative	the Bay. It is assumed that the young child (1 to <7 years) would not		
						Inhalation of Vapors	Quantitative	typically accompany adult anglers due to safety concerns. Inhalation		
					Adult (>18 years)	Incidental Ingestion	Quantitative	may occur if activities are in mudflat areas and volatiles are present.		
						Dermal Contact	Quantitative			
						Inhalation of Vapors	Quantitative			
					Child (1 to <7 years)	Incidental Ingestion	Quantitative			
						Dermal Contact	Quantitative			
						Inhalation of Vapors	Quantitative	Swimming does occur in Newark Bay. Swimmers may contact sedimer		
						Incidental Ingestion	Quantitative	while entering and leaving the bay from the banks of the water.		
				Swimmer	Adolescent (7 to <19 years)	Dermal Contact	Quantitative	Inhalation may occur if activities are in mudflat areas and volatiles are		
						Inhalation of Vapors	Quantitative	present.		
					Adult (>18 years)	Incidental Ingestion	Quantitative			
						Dermal Contact	Quantitative			
						Inhalation of Vapors	Quantitative			
						Incidental Ingestion	Quantitative			
					Child (1 to <7 years)	Dermal Contact	Quantitative			
					, ,	Inhalation of Vapors	Quantitative			
						Incidental Ingestion	Quantitative	Families visiting parks along the banks or wading down by the bay to		
				Wader	Adolescent (7 to <19 years)	Dermal Contact	Quantitative	bird watch may contact sediment along the banks. Inhalation may occu		
					radieseen (rad sto years)	Inhalation of Vapors	Quantitative	if activities are in mudflat areas and volatiles are present.		
						Incidental Ingestion	Quantitative	<u>'</u>		
					Adult (>18 years)	Dermal Contact	Quantitative	1		
					tasit (* 10 youro)	Inhalation of Vapors	Quantitative	1		
						Incidental Ingestion	Quantitative			
					Child (1 to <7 years)	Dermal Contact	Quantitative	-		
					Office (1 to 17 years)	Inhalation of Vapors	Quantitative	-		
						Incidental Ingestion	Quantitative	Recreational boating, including some kayaking takes place in the bay.		
				Boater	Adolescent (7 to <19 years)	moldeniai iligesii0II	Quantitative	Docks are typically used, but boaters may occasionally contact sedime when a boat flips and wading is necessary. Inhalation may occur if		
						1 of 3		activities are in mudflat areas and volatiles are present.		

						Dermal Contact Inhalation of Vapors	Quantitative		
				Adolescent (7 to <19 years)			Quantitative		
						Incidental Ingestion	Quantitative		
			Adult (>1		s)	Dermal Contact	Quantitative	W ISEL DIII IDAIRIS IIIAV OFFASIONAMV FOOTAT CAMUSTON	
			Boater			Inhalation of Vapors	L'Ouantiative de	and wading is necessary labelation may occur if	
				Worker	Adult (>18 years)	Incidental Ingestion Dermal Contact Inhalation of Vapors	Quantitative Quantitative Quantitative	Workers may be tasked with collecting shoreline trash or other work that leads to contact with sediment along the river. Inhalat occur if activities are in mudflat areas and volatiles are present. with surface water is not typically expected to occur.	
				Child (1 to <7 years)		Incidental Ingestion Dermal Contact Inhalation of Vapors	Qualitative Qualitative Residantial Arope sediment during	erties are located near the bay. Residents may contact activities near their homes. Potential risks relative to	
			Resident		Adult (>18 years)	Incidental Ingestion oth@uabitations are di		e discussed in the uncertainty section. Potential risks	
			ר	Γransient Person	Multiple ages	Incidental Ingestion Dermal Contact Inhalation of Vapors	Qualitative Qualitative Qualitative	Evidence of homeless camps has been observed in the study a Limited exposure pattern data would make quantification highly uncertain. Potential risks relative to other receptors are discuss uncertainty section.	
ace Wate	rSurface Water	Baywide				Incidental Ingestion	None		
				Child (1 to <7 y	ears)	Dermal Contact	None		
				, ,	·	Inhalation of Vapors	None		
			Angler/Sportsman			Incidental Ingestion	And least it ative on	act surface water while fishing or crabbing from the	
				Adolescent (7 to	o <19 years)	Dermal Contact			
			Anglet/Spottstriati	,	, ,	Inhalation of Vapors	accompany adult	that young children (1 to <7 years) would not typically anglers due to safety concerns. Inhalation may occur if ent.	
						Incidental Ingestion	Volatiles are pres	ent.	
				A dult /> 40 · · -		Dermal Contact	Quantitative		
				Adult (>18 year	5)	Inhalation of Vapors	Quantitative	-	
						•			
				Object (4.1 see		Incidental Ingestion	Quantitative		
				Child (1 to <7 y	∍ars)	Dermal Contact	Quantitative		
						Inhalation of Vapors	Quantitative		
			Swimmer	Adolescent (7 to	o <19 years)	Incidental Ingestion	Swimming does	occur in the bay. Swimmers may contact surface water nhalation may occur if volatiles are present.	
			Swiritter			Dermal Contact	white swimining.	nhalation may occur if volatiles are present.	
						Inhalation of Vapors Incidental Ingestion	Quantitative Quantitative		
				Adult />19 year	c)	Dermal Contact	Quantitative		
				Adult (>18 year	)	Inhalation of Vapors	Quantitative		
						Incidental Ingestion	Quantitative		
				Child (1 to <7 y	ears)	Dermal Contact	Quantitative	1	
				5.ma (1 to 17 y)		Inhalation of Vapors	Quantitative		
						Incidental Ingestion		parks along the banks or wading down by the bay to	
			Wader	Adolescent (7 to	o <19 years)	Dermal Contact	hid water may c	pme into contac with surface water along the banks.	
						Inhalation of Vapors	Quantitative	parks along the banks or wading down by the bay to ome into contac with surface water along the banks. Ecur if activities are in mudflat areas and volatiles are	
						Incidental Ingestion	Quantitative	<u> </u>	
				Adult (>18 years)		Dermal Contact	Quantitative	<u> </u>	
						Inhalation of Vapors	Quantitative		
						Incidental Ingestion	Quantitative	<u> </u>	
				Child (1 to <7 y	ears)	Dermal Contact	Quantitative		
						Inhalation of Vapors	Quantitative	ing, including some kayaking takes place in the bay.	
					.40	Incidental Ingestion	Docks are typica	ly used, but boaters may occasionally contact surface at flips and wading is necessary. Inhalation may occur if udflat areas and volatiles are present.	
			Boater	Adolescent (7 to	o <19 years)	Dermal Contact	water when a bo	at flips and wading is necessary. Inhalation may occur if	
						Inhalation of Vapors	activities are in n	udflat areas and volatiles are present.	
				Adult (>18 year	- \	Incidental Ingestion  Dermal Contact	Quantitative	·	
							L III ONTITOTIVO		

		Child (1 to <7 years)	Inhalation of Vapors Incidental Ingestion Dermal Contact Inhalation of Vapors		arties are located adjacent to the river, especially above
Resident		Adult (>18 years)	Incidental Ingestion Dermal Contact Inhalation of Vapors	RMOTALISARFACE water from the river is not used as a domestic water supply life ਸੰਗੇਰ ਸਾਰੇ ਸ਼ਹਿਰ ਸੰਗੇਰ ਸੰਗ	may contact surface water during activities near their
	Transient Person	Multiple ages	Incidental Ingestion Dermal Contact Inhalation of Vapors	Qualitative	Evidence of homeless camps has been observed in the study area. Limited exposure pattern data would make quantification highly uncertain. Potential risks relative to other receptors are discussed in the uncertainty section.

## SELECTION OF EXPOSURE PATHWAYS FOR THE NBSA

SELECTION (	OF
Scenario Timeframe Current/ Futur	,
	Scenario Timeframe

			5 of 3		

